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| APPLICATION NO.   | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|------------------|
| 09/819,120  | 03/27/2001  | Stepan Sokolov       | SUN1P811/P5512      | 4323             |
| 22434   | 7590        | 06/27/2005           | EXAMINER            |                  |
| BEYER WEAVER & THOMAS LLP<br>P.O. BOX 70250<br>OAKLAND, CA 94612-0250 |             |                      | SHAH, NILESH R      |                  |
|   |             |                      | ART UNIT            | PAPER NUMBER     |
|   |             |                      | 2195                |                  |

DATE MAILED: 06/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

47

## Office Action Summary

Application No.

09/819,120

Applicant(s)

SOKOLOV ET AL.

Examiner

Nilesh Shah

Art Unit

2195

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 31 May 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,3-6,10,13,16,17 and 21-31 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1,3-6,10,13,16 and 17 is/are allowed.
- 6) ☒ Claim(s) 21-31 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

### DETAILED ACTION

1. Claims 1,3,4,5,7,10,13,16,18 and 21-31 are presented for examination.

#### *Allowable Subject Matter*

2. Claims 1,3,4,5,7,10,13,16,18 are allowed.

#### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 21-31 are rejected under 35 U.S.C. 102(b) as being anticipated by Cartwright (6,075,942).
4. As per claim 21, Cartwright teaches a computer readable medium including computer program code for storing a reduced-set of virtual machine instructions suitable for execution by a virtual machine, wherein the reduced-set of virtual machine instructions (col. 12 lines 35-40) includes a first plurality of virtual machine instructions that collectively represent a complete-set of virtual machine instructions which can be used to implement said virtual machine(col. 13 lines 1-15), wherein said virtual machine may

also be implemented by a larger-set of virtual machine instructions including a second plurality of virtual machine instructions that collectively represent another complete-set of virtual machine instructions which also can be used to implement said virtual machine(col. 1 lines 45-52; col. 2 lines 20-45), wherein the number of virtual machine instructions in said first plurality of virtual machines instructions of said reduced-set is less than the number of instructions in said second plurality of virtual machines instructions in said larger-set (col. 12 lines 25-30; col. 12 lines 35-40).

5. As per claim 22, Cartwright teaches a computer readable medium wherein said reduced-set includes at least one virtual machine instruction which implements a functionality which is not provided by any of the virtual machine instructions in said larger-set (col. 12 lines 35-40; col. 1 lines 45-52; col. 2 lines 20-45).
6. As per claim 23, Cartwright teaches a computer readable medium wherein said reduced-set includes a push, a load, a store, a dup, a return, and a new instruction.(fig. 3; fig. 5; col. 2 lines 63-67; col. 3 lines 19-35).
7. As per claim 24, Cartwright teaches a computer readable medium wherein said virtual machine includes a code stream and a data stream, and wherein the code stream is designated for storing the code associated with virtual machine instructions in said reduced-set of virtual machines instructions and the data stream is designated for storing

Art Unit: 2195

the code associated with virtual machine instructions in said reduced-set of virtual machines instructions (Fig. 10; col. 2 lines 34-62; col. 11 lines 1-20; col. 12 lines 35-40).

8. Claims 25-26 are rejected based on the same rejection as claims 21 and 26 above.
9. As per claim 27, Cartwright teaches virtual machine embodied in a computer readable media, the virtual machine being compatible with a defined virtual machine specification that includes a defined set of executable virtual machine instructions that must be implemented to conform with the virtual machine specification (col. 13 lines 1-15), the virtual machine being arranged to execute a reduced set of virtual machine instructions that provide substantially all of the functionality provided by the defined virtual machine instruction set(col. 1 lines 45-52; col. 2 lines 20-45), and wherein every one of the instructions in the defined set of executable instructions can be represented by at least one of the virtual machine instructions in the reduced virtual machine instruction set(col. 12 lines 35-40), and wherein the reduced set of virtual machine instructions consists of a number of virtual machine instructions which is less than the number executable virtual machine instructions in the defined virtual machine instruction set (col. 12 lines 25-30; col. 12 lines 35-40).
10. Claim 28 is rejected based on the same rejection as claim 23 above.

11. As per claim 29, Cartwright teaches virtual machine, wherein said reduced-set of virtual machine instructions includes at least one virtual machine instruction that represents at least one operation that cannot be represented by any one of the Java Bytecode executable instructions (col. 2 lines 21-35).
12. Claim 30 is rejected based on the same rejection as claim 22 above.
13. As per claim 31, Cartwright teaches a method for translating a first stream of Bytecodes that include virtual machine instructions that are compliant with a defined-set of virtual machine instructions that are defined by a virtual machine specification into a reduced set representation of Bytecodes (col. 2 lines 21-35) that include only virtual machine instructions that are part of a reduced-set of virtual machine instructions, wherein the reduced-set of virtual machine instructions provide substantially all of the functionality provided by the defined virtual machine instruction set and the number of virtual machine instructions in the reduced set of virtual machine instructions is less than the number of virtual instructions in the defined set of virtual machine instructions, the method comprising(col. 12 lines 25-30; col. 12 lines 35-40):receiving a first stream of Bytecodes that include a first plurality of virtual machine instructions, wherein all of the virtual machine instructions in the first stream of Bytecodes are included in and compliant with the defined virtual machine instructions set( col. 6 lines 1-10; col. 2 lines 21-35;col. 14 lines 35-45); andtranslating the first plurality of virtual machine instructions into a second plurality of virtual machine instructions, wherein all of the second plurality of virtual

Art Unit: 2195

machine instructions are included in and compliant with the reduced virtual machine instruction set (col. 14 lines 50-67; col. 2 lines 63-67; col. 3 lines 19-35).

*Conclusion*

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Johnson et al teach the use of a reduced instruction set.
15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nilesh Shah whose telephone number is (571)272-3771. The examiner can normally be reached on 9-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng An can be reached on (571)272-3756. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Nilesh Shah  
Examiner  
Art Unit 2195

  
MENG-AL T. AN  
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NS  
June 20, 2005